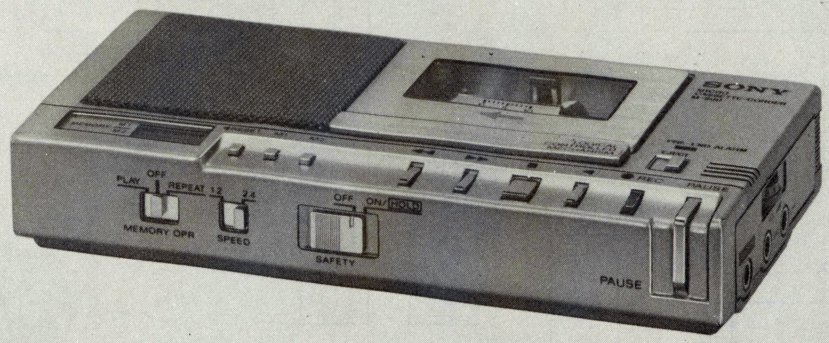
# BM-600

*US Model*
*AEP Model*
*UK Model*




## MICRO PORTABLE DICTATOR/TRANSCRIBER

### SPECIFICATIONS

**Tape:** Microcassette
**Recording System:** 2-track 1-channel monaural
**Fast Winding Time:** Approx. 150 sec. with Sony Microcassette MC-60 BM (at both 1.2 and 2.4 positions)
**Frequency Response:** 200–7,000 Hz (at 2.4 cm position)
200–4,000 Hz (at 1.2 cm position)
**Tape Speeds:** 2.4 cm/sec ($^{15}/_{16}$ ips), 1.2 cm/sec ($^{15}/_{32}$ ips)
**Speaker:** Approx. 4.2 cm ($1\ ^{5}/_{8}$ inches) dia.
**Power Output:** 250 mW (at 10% harmonic distortion) at dc operation
**Input:** Microphone input jack (minijack)
sensitivity 0.2 mV (–72 dB)
for low impedance microphone
**Output:** Earphone jack (minijack)
for 8Ω earphone or load impedance 10 kΩ or higher
**Other Jack:** Remote control jack
**Power Requirements:** 3 V dc, two batteries size AA (IEC designation R6), or optional Sony Rechargeable Battery Pack BP-35
120 V ac, 60 Hz with optional Sony AC-31 AC Power Adaptor (US model)
220V ac, 50Hz with optional Sony AC-35 AC Power Adaptor (AEP Model)
220V/240V ac, 50Hz with optional Sony AC-35 AC Power Adaptor (UK model)
12 V car battery with optional Sony DCC-127A Car Battery Cord
For connection with the BM-600, the supplied PC-200 DC Plug Adaptor is required.
**Battery Life:** Continuous recording hours:
Approx. 11 hours with Eveready Alkaline Batteries E91
Approx. 4 hours with Eveready Heavy Duty Batteries No. 1215
**Dimensions:** Approx. 67 x 138 x 25 mm (w/h/d) (2¾ x 5½ x 1 inches)
not incl. projecting parts and controls
**Weight:** Approx. 330 g (12 oz) incl. batteries

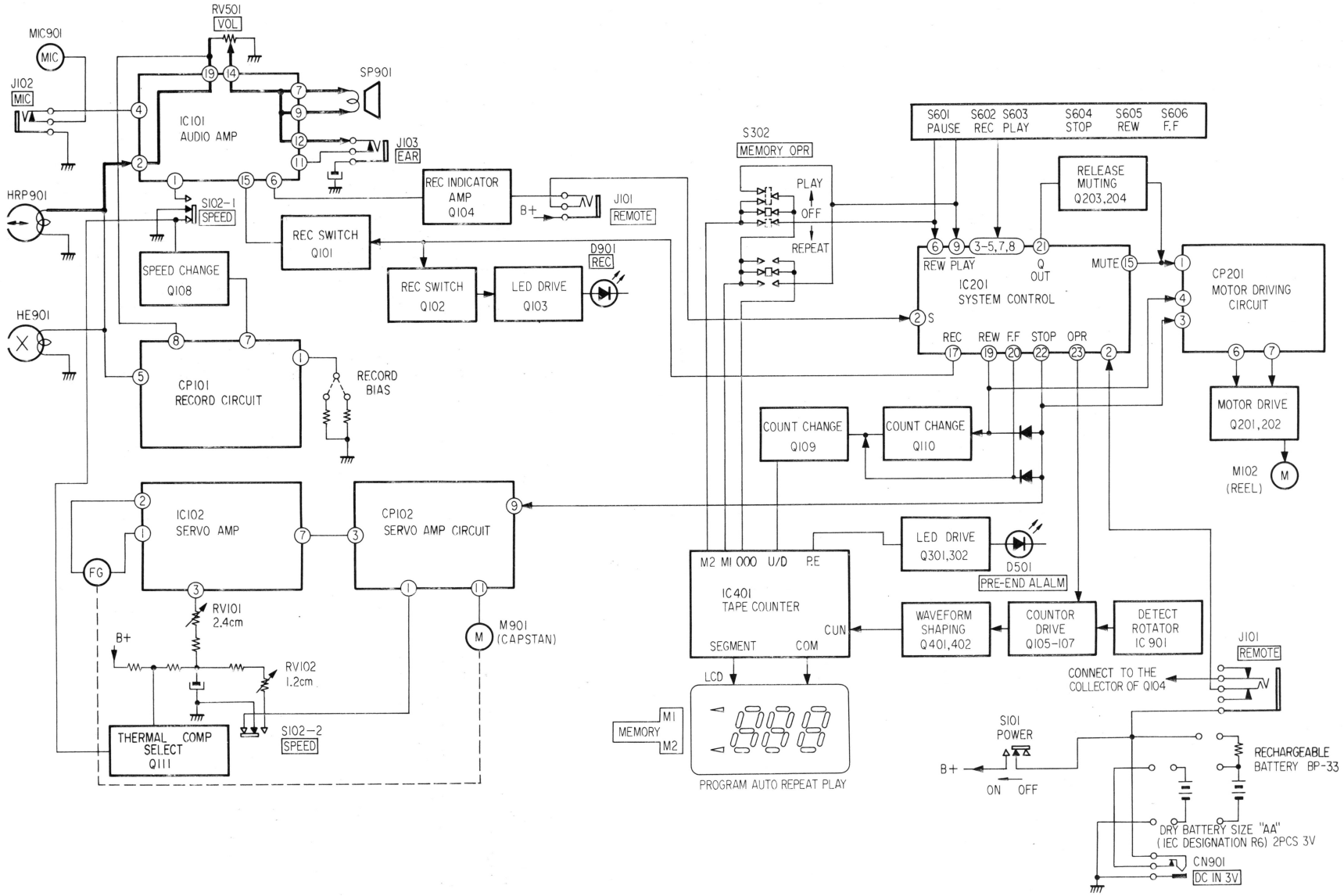
| Tape Transport Mechanism Type | MB-600-92 |
|---|---|

MICROFILM

SONY®
SERVICE MANUAL

# SECTION 1
# OUTLINE

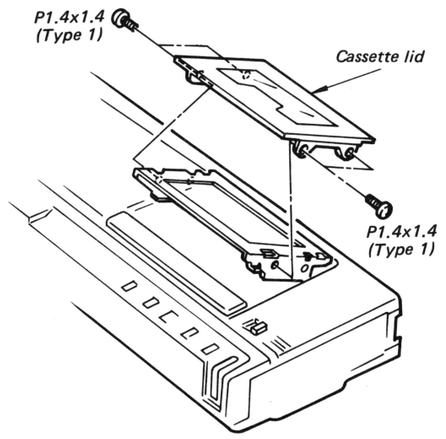
## 1-1. BLOCK DIAGRAM



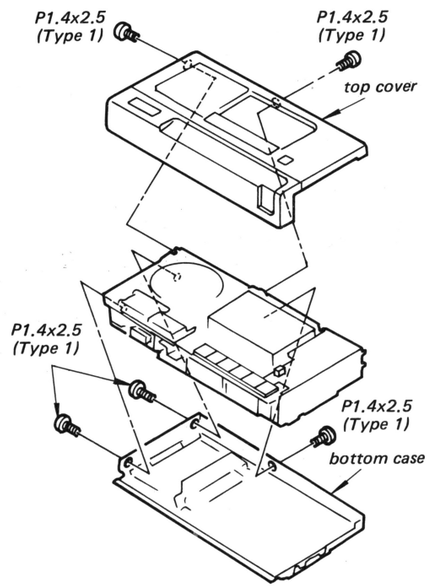
# SECTION 2
# DISASSEMBLY

- Follow the disassembly procedure in the numerical order given.

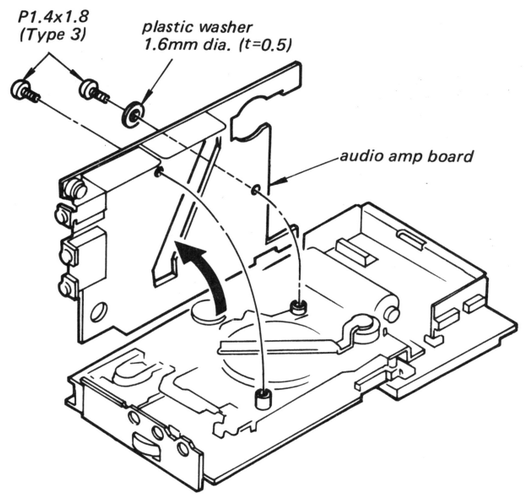
## CASSETTE LID REMOVAL



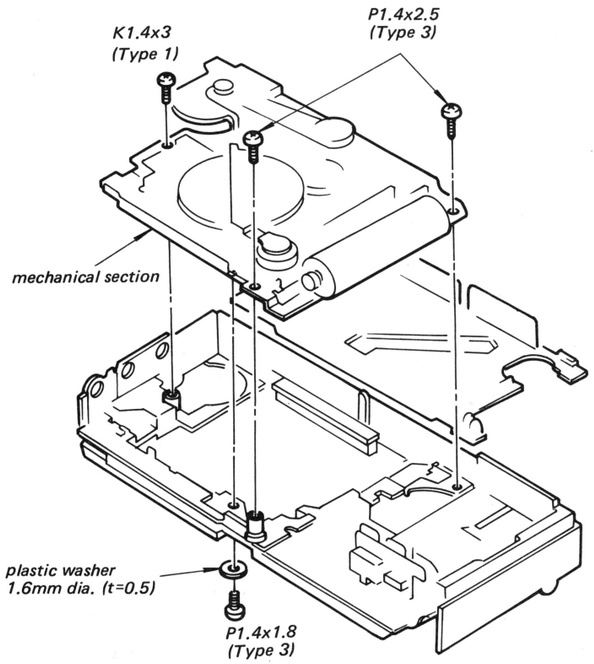

## TOP COVER/BOTTOM CASE REMOVAL




## AUDIO AMP BOARD REMOVAL

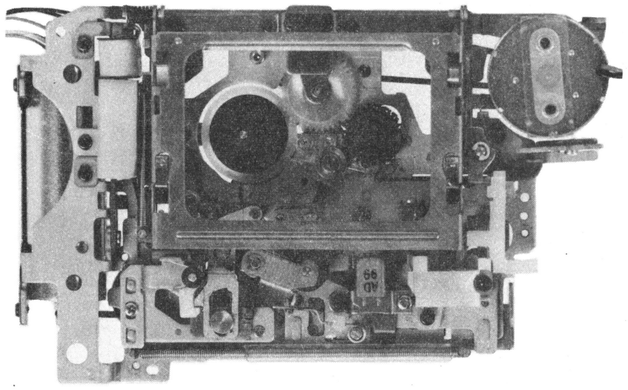



## MECHANICAL SECTION REMOVAL

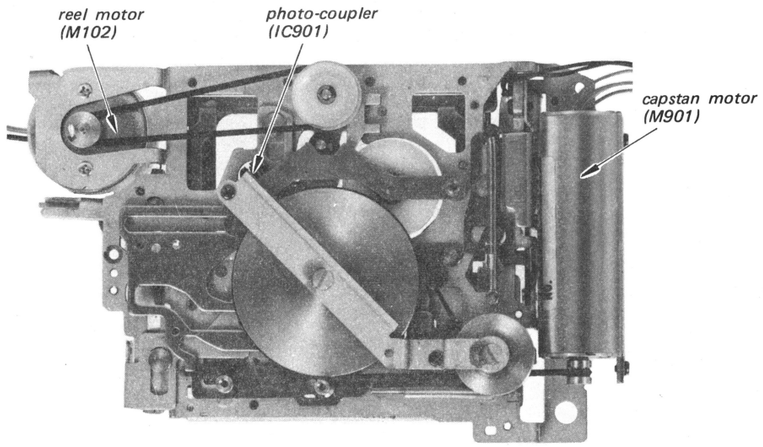



## MECHANICAL SECTION

**Front View**



**Rear View**



# SECTION 3
# ADJUSTMENTS

## 3-1. MECHANICAL ADJUSTMENT

### PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

   | | |
   |---|---|
   | record/playback head | pinch roller |
   | erase head | rubber belts |
   | capstan | idlers |

2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

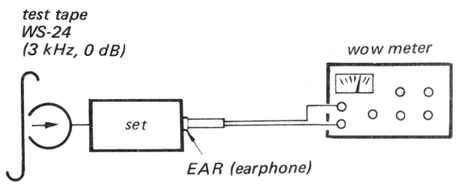
**Wow and Flutter Measurement**

**Setting:**

Power supply voltage: 3V dc
VOL control: Set for the adequate input level of the wow meter.
SPEED switch: 2.4cm

**Procedure:**

Mode: playback

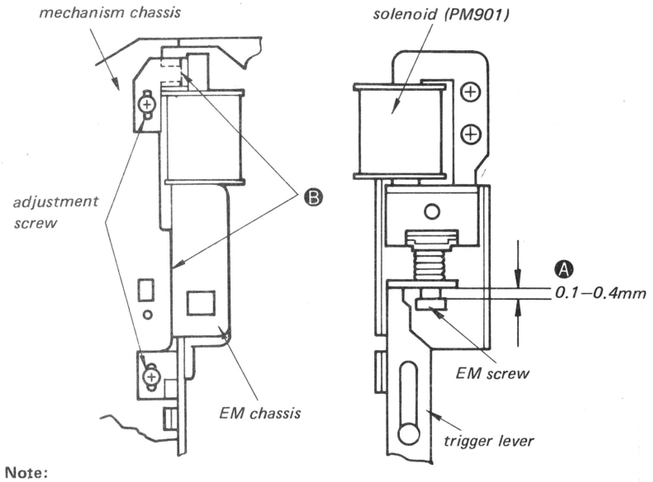



Specification: less than 0.6% (RMS)

**EM (empty) Chassis Position Adjustment**

– Stop Mode –

Turn the adjustment screws so that the clearance Ⓐ is 0.1–0.4mm.



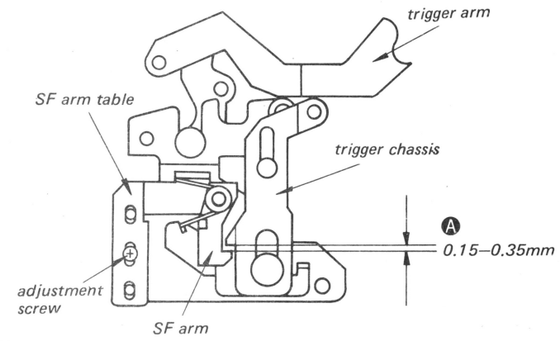

Note:

1) Be sure not to make space in Ⓑ.
2) After the adjustment, change the mode from forward to stop several times.
3) Apply suitable locking compound to the adjustment screws after confirming the clearance Ⓐ is 0.1–0.4mm.

**SF Arm Table Position Adjustment**

– Stop Mode –

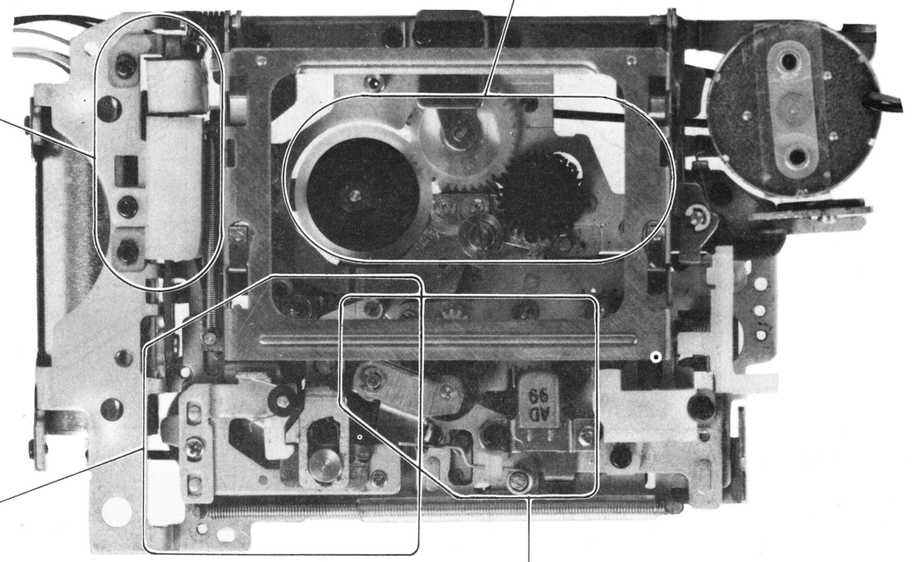
Turn the adjustment screw so that the clearance Ⓐ is 0.15 – 0.35mm.




Note:

1) After the adjustment, change the mode from forward to stop several times.
2) Apply suitable locking compound to the adjustment screw after confirming the clearance Ⓐ is 0.15–0.35mm.

| Torque Measurement | | |
|---|---|---|
| **Mode** | **Cassette type torque meter** | **Torque** |
| Forward | CQ103M | 5 – 10g•cm (0.07 – 0.14oz•inch) |
| Fast Forward and Rewind | CQ201M | more than 25g•cm (more than 0.35oz•inch) |

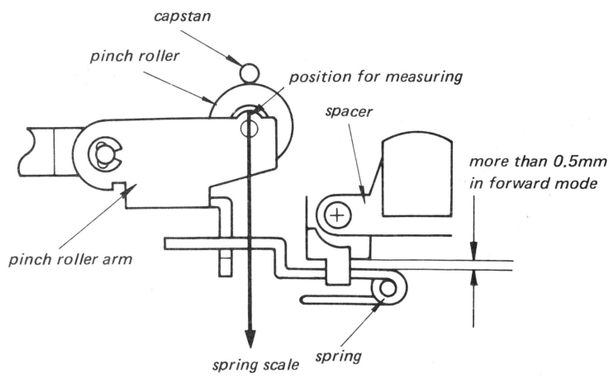


**Pinch Roller Pressure Measurement**

– Playback Mode –

1) Pull the pinch roller by the spring scale (200g) in the direction of arrow as shown on the right.
2) Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating.

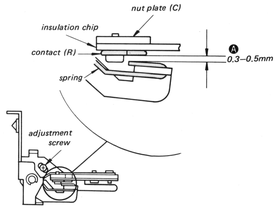
Specification: 90–130g (3–4 oz)

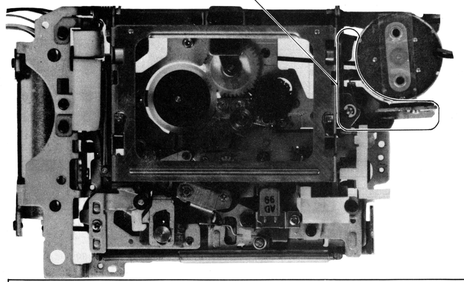


### Anti-Record REC Block (S901) Position Adjustment

**– Stop Mode –**

1) Turn the adjustment screw so that clearance Ⓐ is 0.3–0.5mm when inserting microcassette with the erasure prevention tab.
2) Confirm that the spring touches the contact (R) when inserting microcassette without the erasure prevention tab.
3) After the adjustments, apply suitable locking compound to the adjustment screw.

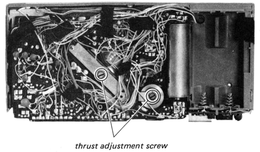


### Flywheel Thrust Play Adjustment

**– Playback Mode –**

1) Turn the thrust adjustment screws fully clockwise and about ¼ turn counterclockwise.
2) Apply suitable locking compound to the thrust adjustment screws.






## 3.2. ELECTRICAL ADJUSTMENT

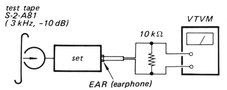
### Record/playback Head Azimuth Adjustment

**Setting:**

VOL control: mechanical mid

**Procedure:**

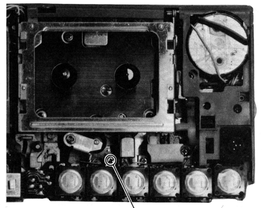
1. Mode: playback (speed : 2.4 cm / s)




2. Turn the adjustment screw for maximum VTVM reading.

**Note:** Several peaks may appear, but take the maximum.

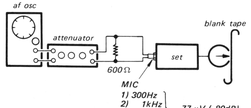
**Adjustment Location:**



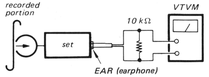

### Record Bias Adjustment

**Procedure:**

1. Mode: record




2. Mode: playback



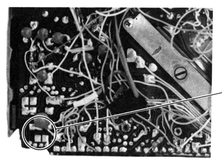

Playback 1 kHz, adjust VOL control for 77 mV (–20dB) VTVM reading.

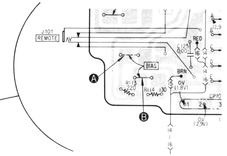
3. Confirm the playback signal levels are as follows. If necessary, change the pattern connections and repeat the steps given above.

**Specifications:**

| speed / frequency | 2.4 cm/s | speed / frequency | 1.2 cm/s |
|---|---|---|---|
| 300 Hz | –5 to –1dB (0.44 to 0.69V) | 300 Hz | –2 to 2dB (0.62 to 0.95V) |
| 5 kHz | –6 to 0dB (0.39 to 0.775V) | 3 kHz | –8 to –2dB (0.31 to 0.62V) |

| Pattern Connection | 3kHz and 5kHz VTVM reading |
|---|---|
| Ⓐ | up ↑ |
| Ⓑ | ↓ down |
| Ⓐ and Ⓑ | |









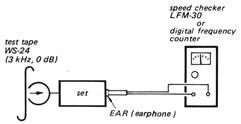
### Tape Speed Adjustment

**Setting:**

VOL control: mechanical mid

**Procedure:**

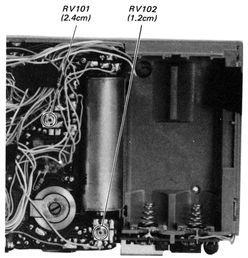
Mode: playback




**Specification:**

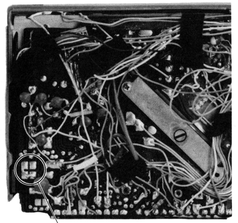
| Speed checker | Digital frequency counter |
|---|---|
| –3 to +3% | 2910–3090Hz (2.4cm)· 1455–1545Hz (1.2cm) |

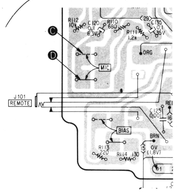
Adjust RV101 for 3000Hz at tape speed 2.4cm. Next, adjust RV102 for 1500Hz at tape speed 1.2cm.




### Microphone Sensitivity Adjustment

In using an electret condenser microphone with a red mark on the side of the case, unsolder Ⓑ and connect Ⓒ.

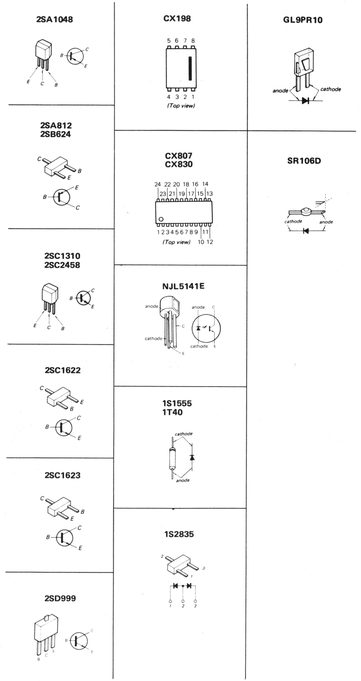







## SECTION 4
## DIAGRAMS

- **Semiconductor lead layouts**

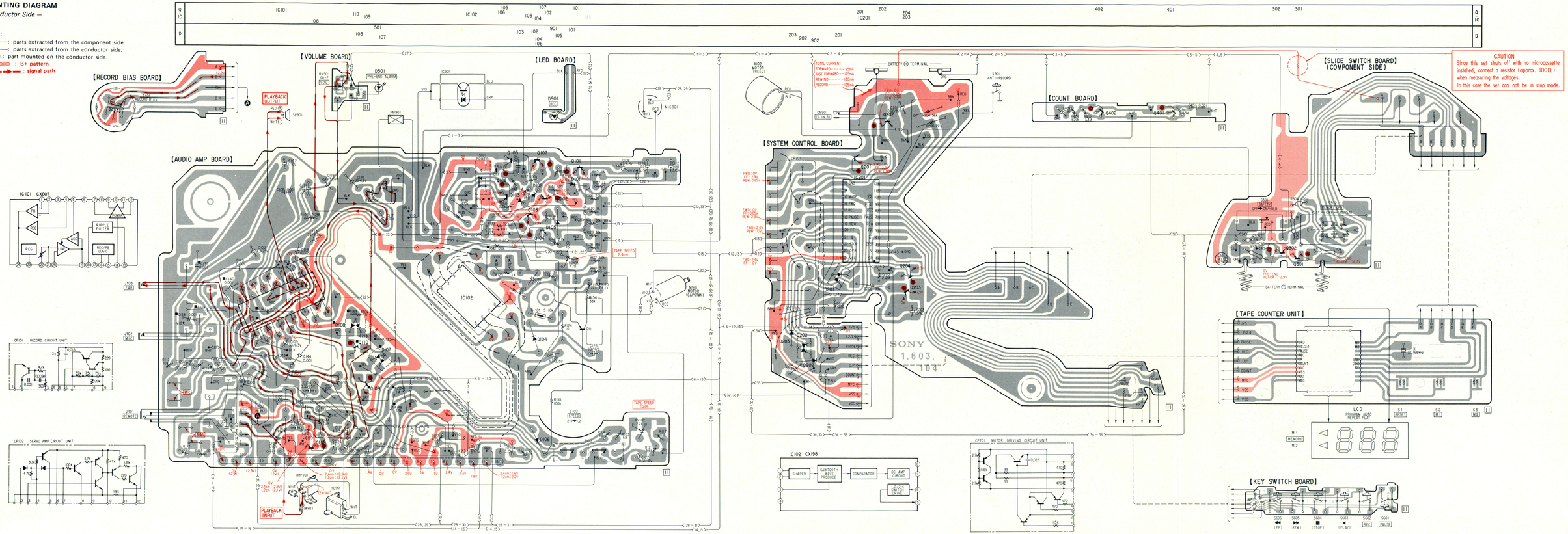


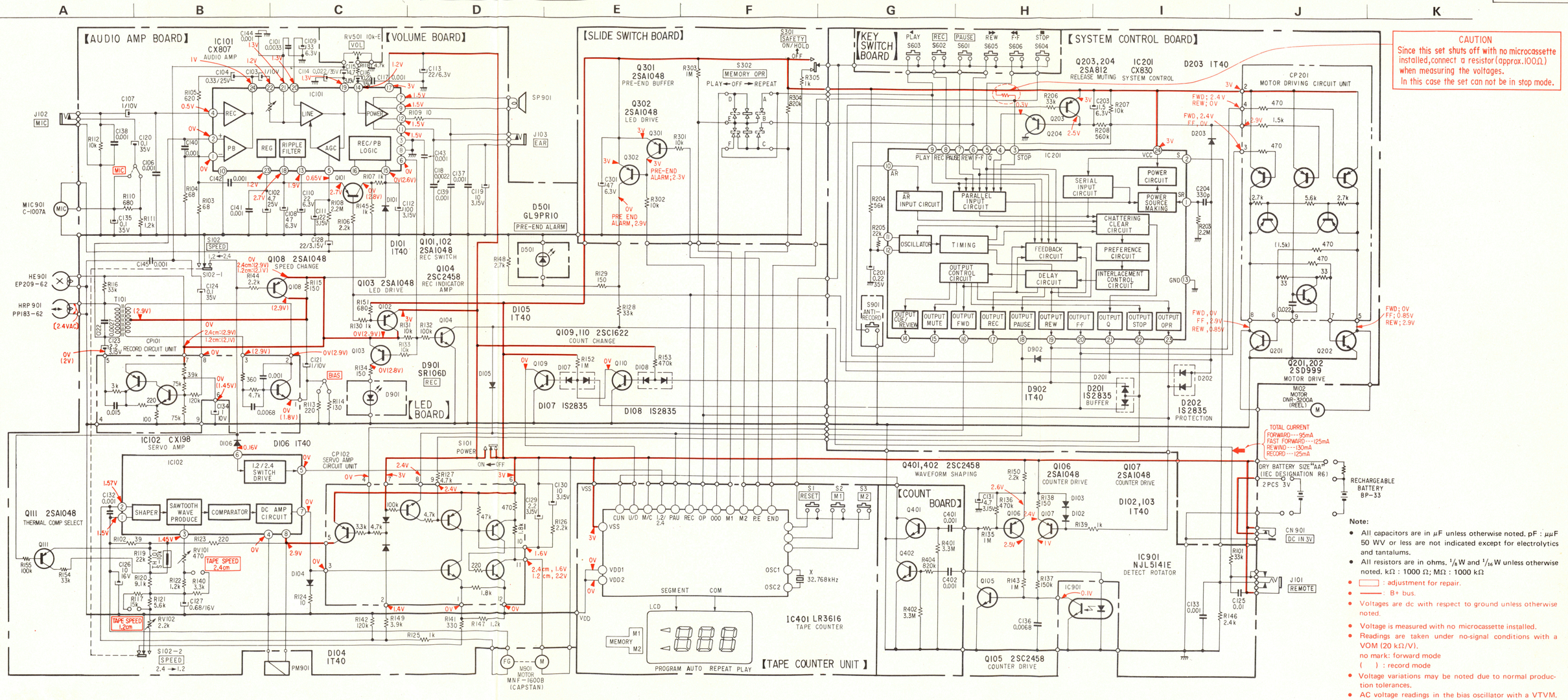
## 4-1. MOUNTING DIAGRAM

*— Conductor Side —*

**Note:**

- ○—: parts extracted from the component side.
- ●—: parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- ■ : B+ pattern
- ■■■ : signal path






Note:

- All capacitors are in μF unless otherwise noted. pF : μμF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms. 1/8 W and 1/16 W unless otherwise noted. kΩ : 1000 Ω; MΩ : 1000 kΩ
- ▭ : adjustment for repair.
- ——— : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage is measured with no microcassette installed.
- Readings are taken under no-signal conditions with a VOM (20 kΩ/V).
  no mark: forward mode
  ( ) : record mode
- Voltage variations may be noted due to normal production tolerances.
- AC voltage readings in the bias oscillator with a VTVM.
- Total current is measured with no microcassette installed.

# SECTION 5
# EXPLODED VIEWS

## DIMENSIONS AND PART NO. OF PRECISION SCREWS

| Type | ⊕ P (Pan-head screw) | | | ⊕ K (Flat-countersunk-head screw) | | |
|---|---|---|---|---|---|---|
| | d mm | H mm | D mm | d mm | H mm | D mm |
| Type 1 | 1.4 | 0.5 | 2 | 1.4 | 0.45 | 2 |
| | 1.7 | 0.5 | 2.5 | | | |
| Type 3 | 1.4 | 0.8 | 2.5 | | | |

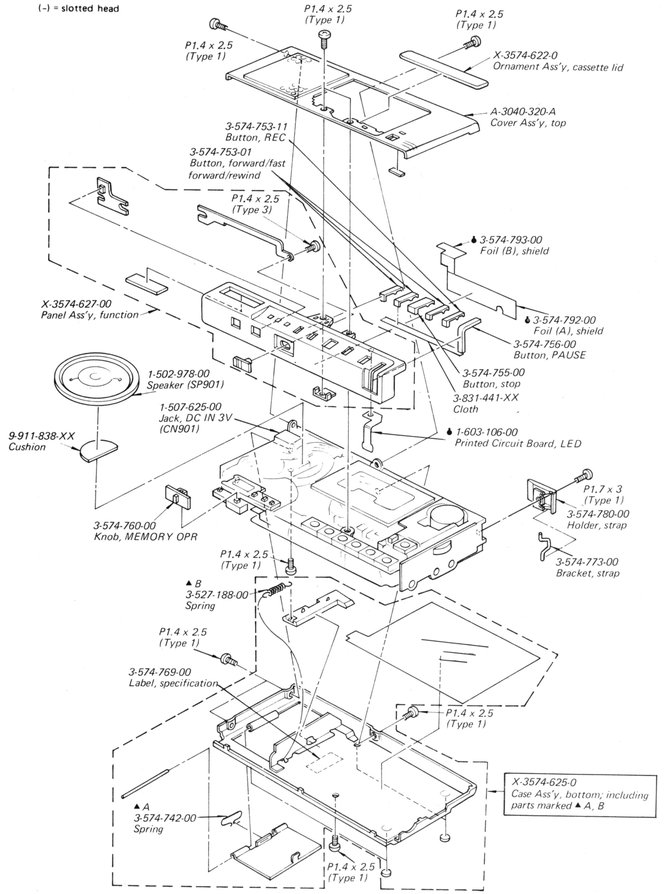
| Type | Size (mm) (d x L) | Part No. |
|---|---|---|
| Type 1 | K1.4 x 3 | 7-627-451-27 |
| | P1.4 x 1.4 | 7-627-551-47 |
| | P1.4 x 1.8 | 7-627-551-87 |
| | P1.4 x 2.5 | 7-627-551-27 |
| | P1.4 x 5 | 7-627-551-37 |
| | P1.7 x 2 | 7-627-552-27 |
| | P1.7 x 3 | 7-627-552-37 |
| | P1.7 x 4 | 7-627-552-47 |
| | P1.7 x 4.5 | 7-627-552-67 |
| Type 3 | P1.4 x 1.8 | 7-627-850-77 |
| | P1.4 x 2.5 | 7-627-850-17 |
| | P1.4 x 3.5 | 7-627-850-57 |





5-1.

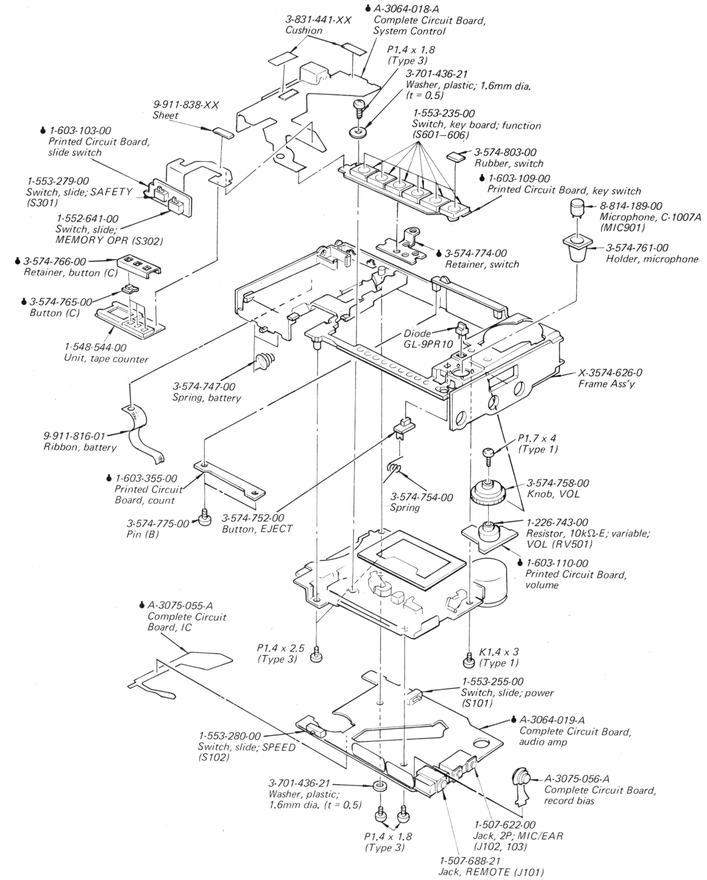
**Note:**
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head


P1.4 x 2.5 (Type 1)
P1.4 x 2.5 (Type 1)
P1.4 x 2.5 (Type 1)
X-3574-622-0 Ornament Ass'y, cassette lid
A-3040-320-A Cover Ass'y, top
3-574-753-11 Button, REC
3-574-753-01 Button, forward/fast forward/rewind
P1.4 x 2.5 (Type 3)
♦ 3-574-793-00 Foil (B), shield
X-3574-627-00 Panel Ass'y, function
♦ 3-574-792-00 Foil (A), shield
3-574-756-00 Button, PAUSE
3-574-755-00 Button, stop
3-831-441-XX Cloth
1-502-978-00 Speaker (SP901)
1-507-625-00 Jack, DC IN 3V (CN901)
9-911-838-XX Cushion
♦ 1-603-106-00 Printed Circuit Board, LED
P1.7 x 3 (Type 1)
3-574-780-00 Holder, strap
3-574-760-00 Knob, MEMORY OPR
3-574-773-00 Bracket, strap
P1.4 x 2.5 (Type 1)
▲ B 3-527-188-00 Spring
P1.4 x 2.5 (Type 1)
3-574-769-00 Label, specification
P1.4 x 2.5 (Type 1)
X-3574-625-0 Case Ass'y, bottom; including parts marked ▲ A, B
▲ A 3-574-742-00 Spring
P1.4 x 2.5 (Type 1)



BM-600

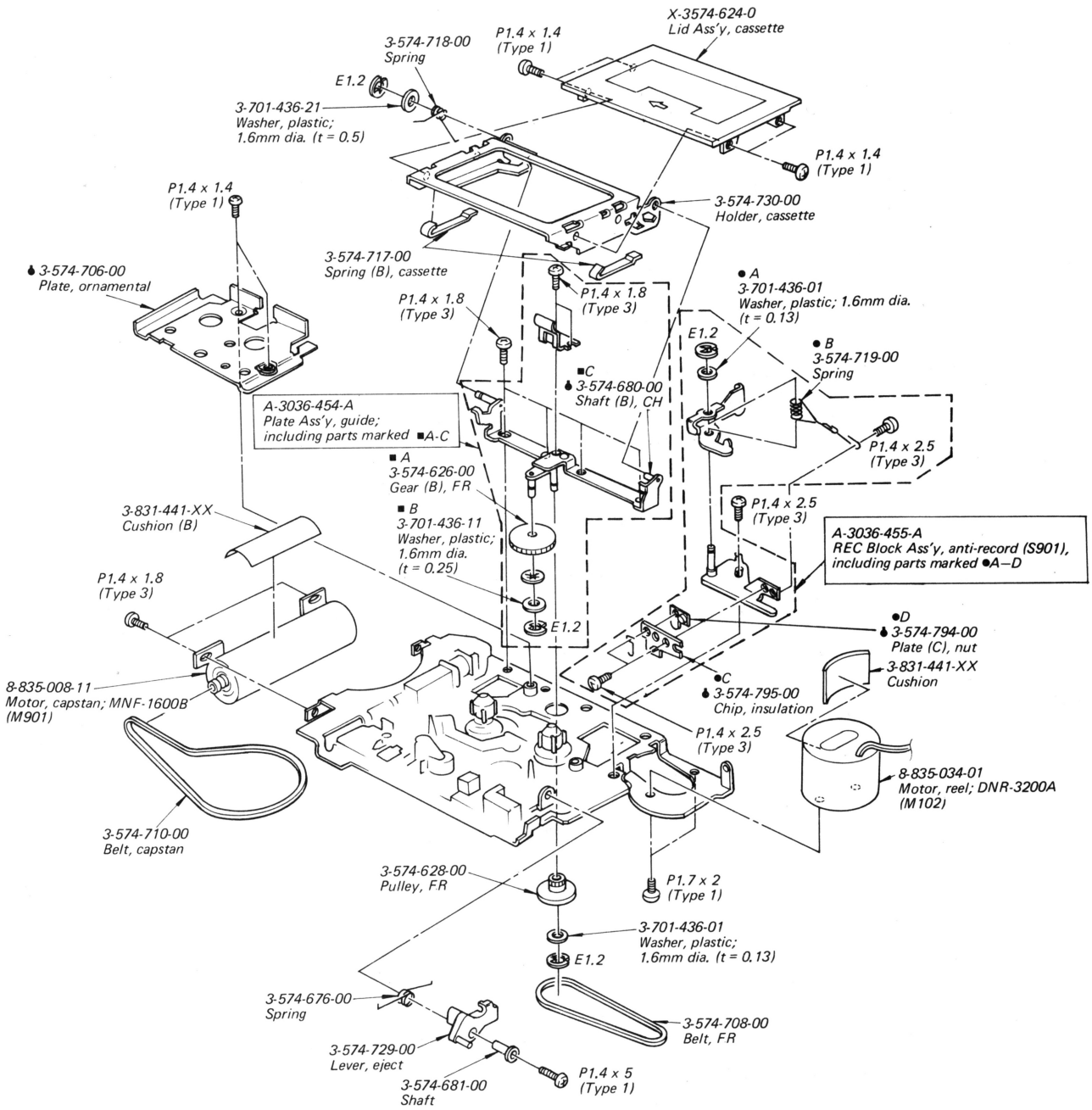
5-2.


♦ A-3064-018-A Complete Circuit Board, System Control
3-831-441-XX Cushion
P1.4 x 1.8 (Type 3)
3-701-436-21 Washer, plastic; 1.6mm dia. (t = 0.5)
9-911-838-XX Sheet
1-553-235-00 Switch, key board; function (S601–606)
♦ 1-603-103-00 Printed Circuit Board, slide switch
3-574-803-00 Rubber, switch
♦ 1-603-109-00 Printed Circuit Board, key switch
1-553-279-00 Switch, slide; SAFETY (S301)
8-814-189-00 Microphone, C-1007A (MIC901)
1-552-641-00 Switch, slide; MEMORY OPR (S302)
♦ 3-574-774-00 Retainer, switch
3-574-761-00 Holder, microphone
♦ 3-574-766-00 Retainer, button (C)
♦ 3-574-765-00 Button (C)
Diode GL-9PR10
1-548-544-00 Unit, tape counter
X-3574-626-0 Frame Ass'y
3-574-747-00 Spring, battery
9-911-816-01 Ribbon, battery
P1.7 x 4 (Type 1)
♦ 1-603-355-00 Printed Circuit Board, count
3-574-758-00 Knob, VOL
3-574-754-00 Spring
3-574-775-00 Pin (B)
3-574-752-00 Button, EJECT
1-226-743-00 Resistor, 10kΩ-E; variable; VOL (RV501)
♦ 1-603-110-00 Printed Circuit Board, volume
♦ A-3075-055-A Complete Circuit Board, IC
P1.4 x 2.5 (Type 3)
K1.4 x 3 (Type 1)
1-553-255-00 Switch, slide; power (S101)
♦ A-3064-019-A Complete Circuit Board, audio amp
1-553-280-00 Switch, slide; SPEED (S102)
3-701-436-21 Washer, plastic; 1.6mm dia. (t = 0.5)
A-3075-056-A Complete Circuit Board, record bias
P1.4 x 1.8 (Type 3)
1-507-622-00 Jack, 2P; MIC/EAR (J102, 103)
1-507-688-21 Jack, REMOTE (J101)

A B C D

1 2 3 4 5

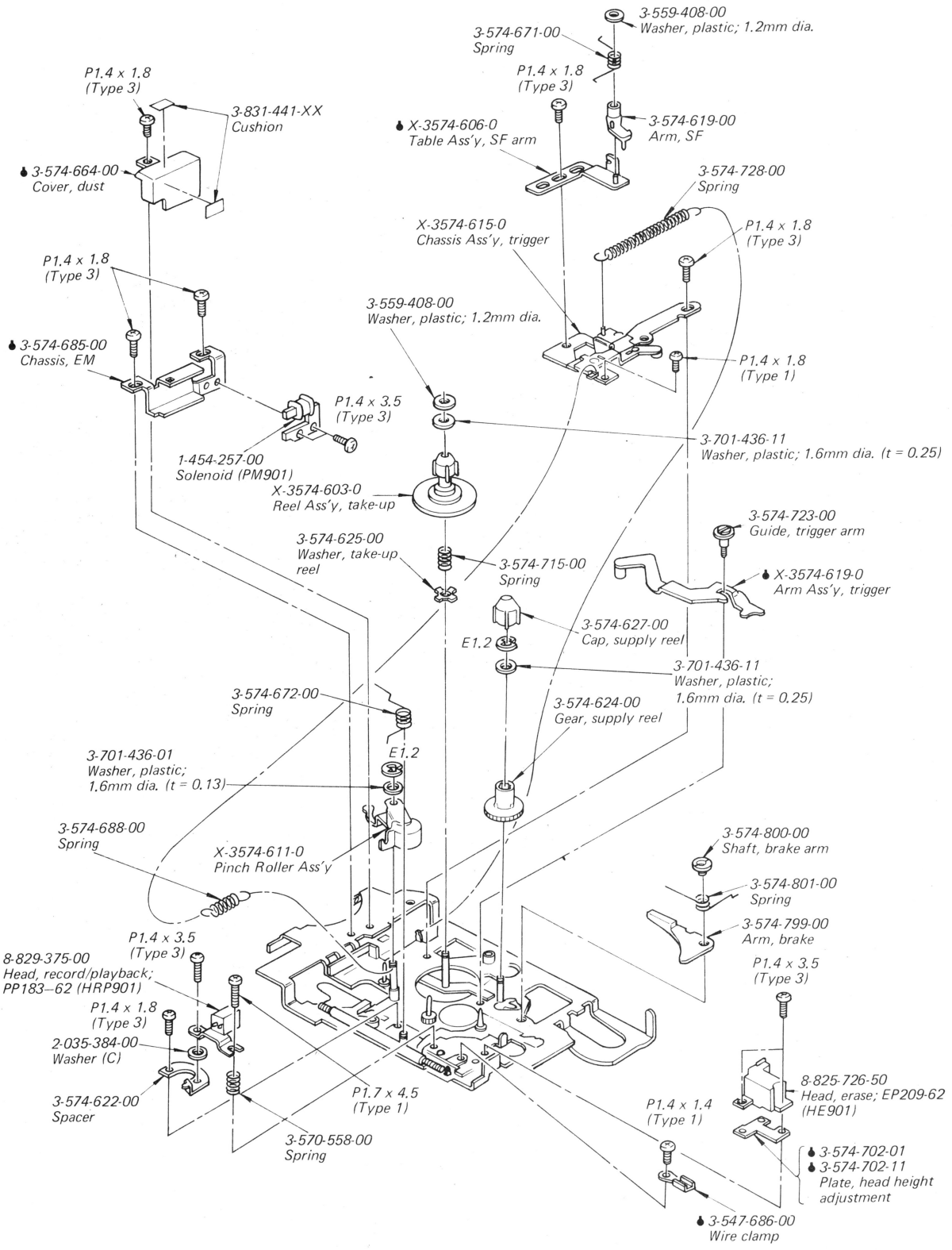
**5-3.**



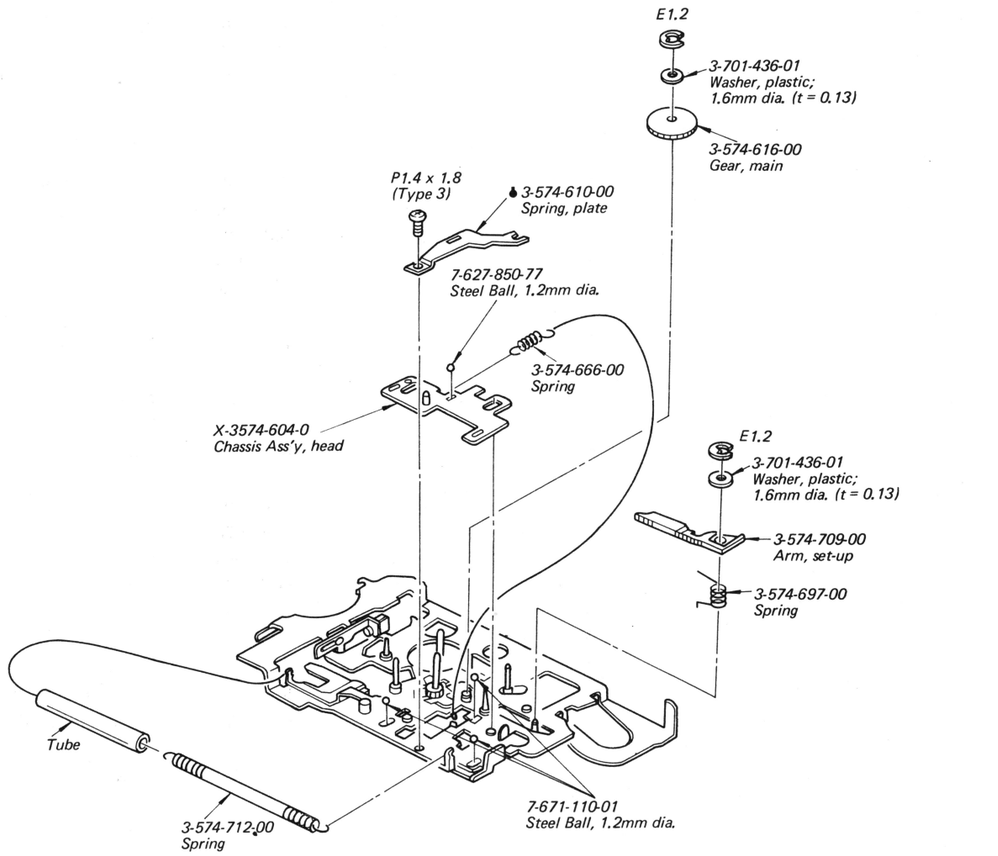
A B C D

1 2 3 4 5

**5-4.**

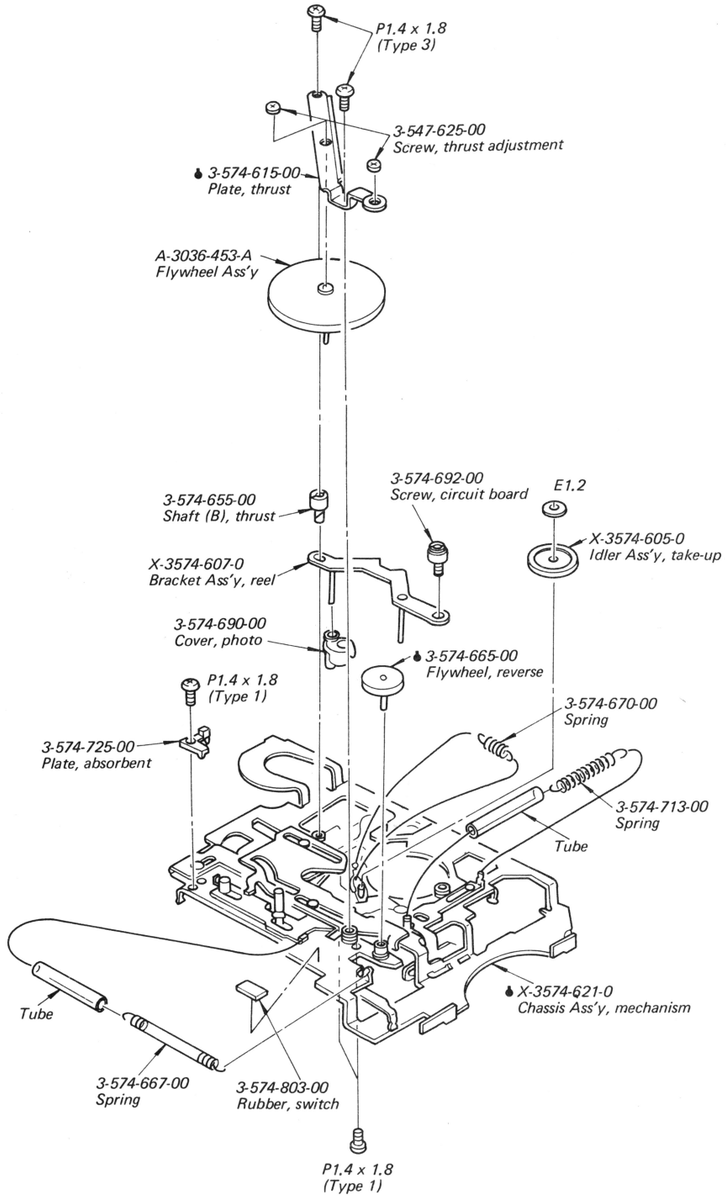


5-5.


E1.2
3-701-436-01
Washer, plastic;
1.6mm dia. (t = 0.13)
3-574-616-00
Gear, main
P1.4 x 1.8
(Type 3)
3-574-610-00
Spring, plate
7-627-850-77
Steel Ball, 1.2mm dia.
3-574-666-00
Spring
X-3574-604-0
Chassis Ass'y, head
E1.2
3-701-436-01
Washer, plastic;
1.6mm dia. (t = 0.13)
3-574-709-00
Arm, set-up
3-574-697-00
Spring
Tube
3-574-712-00
Spring
7-671-110-01
Steel Ball, 1.2mm dia.



5-6.


P1.4 x 1.8
(Type 3)
3-547-625-00
Screw, thrust adjustment
3-574-615-00
Plate, thrust
A-3036-453-A
Flywheel Ass'y
3-574-655-00
Shaft (B), thrust
3-574-692-00
Screw, circuit board
E1.2
X-3574-605-0
Idler Ass'y, take-up reel
X-3574-607-0
Bracket Ass'y, reel
3-574-690-00
Cover, photo
3-574-665-00
Flywheel, reverse
P1.4 x 1.8
(Type 1)
3-574-670-00
Spring
3-574-725-00
Plate, absorbent
3-574-713-00
Spring
Tube
X-3574-621-0
Chassis Ass'y, mechanism
Tube
3-574-667-00
Spring
3-574-803-00
Rubber, switch
P1.4 x 1.8
(Type 1)

# SECTION 6
# ELECTRICAL PARTS LIST

| Ref. No. | Part No. | Description |
|---|---|---|
| | **SEMICONDUCTORS** | |
| | **Transistors** | |
| Q101–103 | 8-729-204-82 | 2SA1048 |
| Q104, 105 | 8-729-631-02 | 2SC1310 |
| Q106–108 | 8-729-204-82 | 2SA1048 |
| Q109, 110 | 8-729-103-66 | 2SC1623 |
| Q111 | 8-729-204-82 | 2SA1048 |
| Q201, 202 | 8-729-199-92 | 2SD999 |
| Q203, 204 | 8-729-102-44 | 2SB624 |
| Q301, 302 | 8-729-204-82 | 2SA1048 |
| Q401, 402 | 8-729-631-02 | 2SC1310 |
| | **ICs** | |
| IC101 | 8-759-608-07 | CX807 |
| IC102 | 8-751-980-00 | CX198 |
| IC201 | 8-759-608-30 | CX830 |
| IC901 | 8-719-751-42 | NJL5141E |
| | **Diodes** | |
| D101–106 | 8-719-815-55 | 1S1555 |
| D107, 108, D201, 202 | 8-719-100-03 | 1S2835 |
| D203 | 8-719-815-55 | 1S1555 |
| D501 | 8-719-909-10 | GL9PR10 |
| D901 | 8-719-101-06 | SR106D |
| D902 | 8-719-815-55 | 1S1555 |
| | **CAPACITORS** | |

All capacitors are in μF unless otherwise noted. 50WV or less are not indicated except for electrolytics and tantalums. p: μμF, elect: electrolytic

| | | | | |
|---|---|---|---|---|
| C101 | 1-161-007-00 | 0.0033 | | semiconductor |
| C102 | 1-123-616-00 | 4.7 | 25V | elect |
| C103 | 1-131-418-00 | 1 | 10V | tantalum |
| C104 | 1-131-409-00 | 0.33 | 25V | tantalum |
| C106 | 1-161-001-00 | 0.001 | | semiconductor |
| C107 | 1-131-418-00 | 1 | 10V | tantalum |
| C108 | 1-131-387-00 | 47 | 6.3V | tantalum |
| C109 | 1-131-386-00 | 33 | 6.3V | tantalum |
| C110 | 1-131-385-00 | 22 | 6.3V | tantalum |
| C111 | 1-131-391-00 | 22 | 3.15V | tantalum |
| C112 | 1-131-395-00 | 100 | 3.15V | tantalum |
| C113 | 1-131-385-00 | 22 | 6.3V | tantalum |
| C114 | 1-131-398-00 | 0.022 | 35V | tantalum |
| C115 | 1-131-425-00 | 4.7 | 3.15V | tantalum |
| C116 | 1-131-404-00 | 0.22 | 35V | tantalum |
| C117 | 1-161-001-00 | 0.001 | | semiconductor |
| C118 | 1-161-005-00 | 0.0022 | | semiconductor |
| C119 | 1-131-426-00 | 10 | 3.15V | tantalum |
| C120 | 1-131-402-00 | 0.1 | 35V | tantalum |
| C121 | 1-131-418-00 | 1 | 10V | tantalum |
| C122 | 1-161-044-00 | 0.0027 | | semiconductor |
| C123 | 1-131-424-00 | 2.2 | 3.15V | tantalum |
| C124 | 1-131-402-00 | 0.1 | 35V | tantalum |
| C125 | 1-161-013-00 | 0.01 | | semiconductor |
| C126 | 1-123-617-00 | 10 | 16V | elect |
| C127 | 1-131-415-00 | 0.68 | 16V | tantalum |
| C128 | 1-131-391-00 | 22 | 3.15V | tantalum |
| C129 | 1-131-424-00 | 2.2 | 3.15V | tantalum |
| C130 | 1-131-426-00 | 10 | 3.15V | tantalum |
| C131 | 1-131-425-00 | 4.7 | 3.15V | tantalum |
| C132, 133 | 1-161-001-00 | 0.001 | | semiconductor |
| C134 | 1-131-418-00 | 1 | 10V | tantalum |
| C135 | 1-131-402-00 | 0.1 | 35V | tantalum |
| C136 | 1-161-011-00 | 0.0068 | | semiconductor |
| C137–142 | 1-102-074-00 | 0.001 | | ceramic |
| C143–145 | 1-101-001-00 | 0.001 | | ceramic |
| C201 | 1-131-343-00 | 0.22 | 35V | tantalum |
| C203 | 1-131-421-00 | 1.5 | 6.3V | tantalum |
| C204 | 1-102-112-00 | 330p | | ceramic |
| C301 | 1-131-387-00 | 47 | 6.3V | tantalum |
| C401, 402 | 1-161-001-00 | 0.001 | | semiconductor |
| | **RESISTORS** | | | |

All resistors are in ohms and carbon unless otherwise noted.

| | | | | |
|---|---|---|---|---|
| R101 | 1-210-381-00 | 33k | 1/16 W | micro |
| R102 | 1-210-848-00 | 39 | 1/16 W | micro |
| R103, 104 | 1-210-353-00 | 68 | 1/16 W | micro |
| R105 | 1-246-841-00 | 620 | 1/8 W | |
| R106 | 1-209-768-00 | 2.2k | 1/16 W | micro |
| R107 | 1-204-122-00 | 1k | 1/16 W | micro |
| R108 | 1-211-697-00 | 2.2M | 1/16 W | micro |
| R109 | 1-246-759-00 | 10 | 1/8 W | |
| R110 | 1-246-781-00 | 680 | 1/8 W | |
| R111 | 1-246-784-00 | 1.2k | 1/8 W | |
| R112 | 1-246-795-00 | 10k | 1/8 W | |
| R113 | 1-246-775-00 | 220 | 1/8 W | |
| R114 | 1-246-833-00 | 130 | 1/8 W | |
| R115 | 1-210-102-00 | 150 | 1/16 W | micro |
| R116 | 1-246-801-00 | 33k | 1/8 W | |
| R117 | 1-246-797-00 | 15k | 1/8 W | |
| R118 | 1-209-773-00 | 4.7k | 1/16 W | micro |
| R119 | 1-210-114-00 | 22k | 1/16 W | micro |
| R120 | 1-209-780-00 | 9.1k | 1/16 W | micro |
| R121 | 1-246-792-00 | 5.6k | 1/8 W | |
| R122 | 1-209-765-00 | 1.2k | 1/16 W | micro |
| R123 | 1-246-775-00 | 220 | 1/8 W | |
| R124 | 1-246-759-00 | 10 | 1/8 W | |
| R125 | 1-246-783-00 | 1k | 1/8 W | |
| R126 | 1-209-768-00 | 2.2k | 1/16 W | micro |
| R127 | 1-209-773-00 | 4.7k | 1/16 W | micro |
| R128 | 1-210-381-00 | 33k | 1/16 W | micro |
| R129 | 1-210-102-00 | 150 | 1/16 W | micro |
| R130 | 1-204-122-00 | 1k | 1/16 W | micro |
| R131 | 1-246-795-00 | 10k | 1/8 W | |
| R132 | 1-246-807-00 | 100k | 1/8 W | |
| R133 | 1-246-795-00 | 10k | 1/8 W | |
| R134 | 1-210-102-00 | 150 | 1/16 W | micro |
| R135 | 1-247-053-00 | 1M | 1/8 W | |
| R136 | 1-247-049-00 | 470k | 1/8 W | |
| R137 | 1-246-809-00 | 150k | 1/8 W | |
| R138 | 1-246-773-00 | 150 | 1/8 W | |
| R139 | 1-204-122-00 | 1k | 1/16 W | micro |
| R140 | 1-204-123-00 | 3.3k | 1/16 W | micro |
| R141 | 1-209-763-00 | 330 | 1/16 W | micro |
| R142 | 1-246-808-00 | 120k | 1/8 W | |
| R143 | 1-247-053-00 | 1M | 1/8 W | |
| R144 | 1-246-787-41 | 2.2k | 1/8 W | |
| R145 | 1-204-122-00 | 1k | 1/16 W | micro |
| R146 | 1-214-466-00 | 2.4k | 1/8 W | metal film |
| R147 | 1-246-784-00 | 1.2k | 1/8 W | |
| R148 | 1-209-770-00 | 2.7k | 1/16 W | micro |
| R148 | 1-246-788-00 | 2.7k | 1/8 W | |
| R149 | 1-246-790-00 | 3.9k | 1/8 W | |
| R150 | 1-210-114-00 | 2.2k | 1/16 W | micro |
| R151 | 1-210-106-00 | 680 | 1/16 W | micro |
| R152 | 1-247-053-00 | 1M | 1/8 W | |
| R153 | 1-247-049-00 | 470k | 1/8 W | |
| R154 | 1-210-381-00 | 33k | 1/16 W | micro |
| R155 | 1-246-807-00 | 100k | 1/8 W | |
| R203 | 1-211-697-00 | 2.2M | 1/16 W | micro |
| R204 | 1-246-804-00 | 56k | 1/8 W | |
| R205 | 1-246-799-00 | 22k | 1/8 W | |
| R206 | 1-246-801-00 | 33k | 1/8 W | |
| R207 | 1-246-795-00 | 10k | 1/8 W | |
| R208 | 1-211-695-00 | 560k | 1/16 W | micro |
| R301, 302 | 1-246-795-00 | 10k | 1/8 W | |
| R303 | 1-247-053-00 | 1M | 1/8 W | |
| R304 | 1-211-689-00 | 820k | 1/16 W | micro |
| R305 | 1-204-122-00 | 1k | 1/16 W | micro |
| R401, 402 | 1-211-719-00 | 3.3M | 1/16 W | micro |
| R404 | 1-211-689-00 | 820k | 1/16 W | micro |
| RV101 | 1-229-936-00 | 470-B, adjustable; tape speed (2.4cm) | | |
| RV102 | 1-226-937-00 | 2.2k-B, adjustable; tape speed (1.2cm) | | |
| RV501 | 1-226-743-00 | 10k-E, variable; VOL | | |
| | **MISCELLANEOUS** | | | |
| CN901 | 1-507-625-00 | Jack, DC IN 3V | | |
| CP101 | 1-464-123-00 | Unit, record circuit | | |
| CP102 | 1-464-122-00 | Unit, servo amp circuit | | |
| CP201 | 1-464-121-00 | Unit, motor driving circuit | | |
| HE901 | 8-825-726-50 | Head, erase; EP209-62 | | |
| HRP901 | 8-829-375-00 | Head, record/playback; PP183-62 | | |
| J101 | 1-507-688-21 | Jack, REMOTE | | |
| J102, 103 | 1-507-622-00 | Jack, 2P; MIC/EAR | | |
| M102 | 8-835-034-01 | Motor, reel; DNR-3200A | | |
| M901 | 8-835-008-11 | Motor, capstan; MNF-1600B | | |
| MIC901 | 8-814-189-00 | Microphone, C-1007A | | |

• Items marked "•" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

| *Ref. No.* | *Part No.* | *Description* |
|---|---|---|
| PM901 | 1-454-257-00 | Solenoid |
| S101 | 1-553-255-00 | Switch, slide; power |
| S102 | 1-553-280-00 | Switch, slide; SPEED |
| S301 | 1-552-641-00 | Switch, slide; SAFETY |
| S302 | 1-553-279-00 | Switch, slide; MEMORY OPR |
| S601–606 | 1-553-235-00 | Switch, key board; function |
| S901 | A-3036-455-A | REC Block Ass'y, anti-record |
| SP901 | 1-502-978-00 | Speaker |
| TH101 | 1-800-202-XX | Thermister S-10k |
| | 1-548-544-00 | Unit, tape counter |

**COMPLETE CIRCUIT BOARDS**

| | |
|---|---|
| ∎ A-3064-018-A | System Control |
| ∎ A-3064-019-A | Audio Amp |
| ∎ A-3075-055-A | Servo IC |
| A-3075-056-A | Record Bias |

**PRINTED CIRCUIT BOARDS**

| | |
|---|---|
| ∎ 1-603-103-00 | Slide Switch |
| ∎ 1-603-106-00 | LED |
| ∎ 1-603-109-00 | Key Switch |
| ∎ 1-603-110-00 | Volume |
| ∎ 1-603-355-00 | Count |

**ACCESSORIES AND PACKING MATERIALS**

| *Part No.* | *Description* |
|---|---|
| X-3701-105-0 | Tip Ass'y, head cleaning |
| 1-504-059-11 | Earphone, ME-20H |
| 1-506-309-00 | Plug, shorting; SP-100 |
| 1-551-713-00 | Cord, connection |
| 3-570-631-00 | Bag, plastic; for set |
| 3-570-888-00 | Strap, hand |
| 3-574-781-00 | Case carrying |
| 3-574-786-00 | Cushion |
| 3-574-788-00 | Spacer |
| 3-574-790-00 | Carton (US model) |
| 3-574-811-00 | Carton (AEP, UK model) |
| 3-701-617-00 | Bag, plastic; for accessories |
| 3-701-620-00 | Bag, plastic; for carrying case |
| 3-701-624-00 | Bag, plastic; for instruction manual |
| 3-783-319-11 | Manual, instruction (AEP, UK model) |
| 3-783-319-21 | Manual, instruction (US model) |
| 3-794-006-21 | Card, micro cassette recorder caution |
| 8-891-109-00 | Tape, micro cassette; MC-60BM(S) (US model) |
| 8-891-117-00 | Tape, micro cassette; MC-60(E) (AEP, UK model) |

**Sony Corporation**

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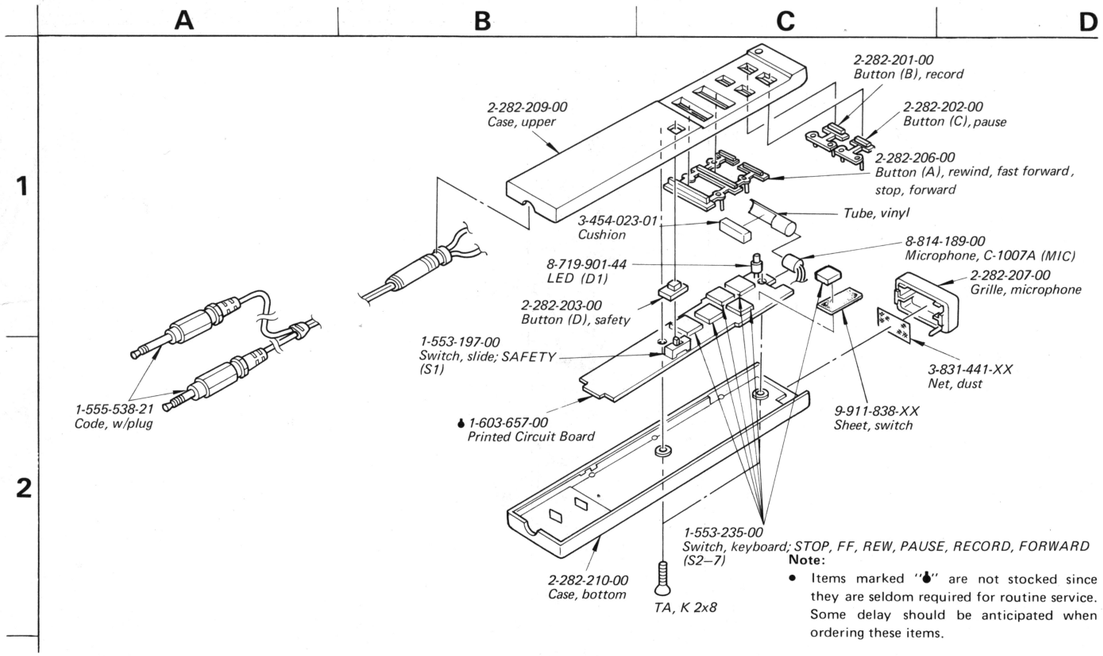
**9-954-960-01**
(With RM-33)



81A0205-2
Printed in Japan

## 4. EXPLODED VIEW




**Note:**

- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## 5. ELECTRICAL PARTS LIST

| Ref. No. | Part No. | Description | | |
|---|---|---|---|---|
| | | **SEMICONDUCTORS** | | |
| | | **Transistors** | | |
| Q1, 3 | 8-729-245-83 | 2SC2458 | | |
| Q2 | 8-729-204-82 | 2SA1048 | | |
| | | **Diode** | | |
| D1 | 8-719-901-44 | SLP144B | | |
| | | **CAPACITORS** | | |
| C1 | 1-121-651-00 | 10μF | 16V | electrolytic |
| C2 | 1-123-306-00 | 47μF | 6.3V | electrolytic |
| C3, 4 | 1-131-451-00 | 0.1μF | 16V | tantalum |
| | | **RESISTORS** | | |
| R1 | 1-214-545-00 | 330Ω | 1/8W | metal oxide (1%) |
| R2 | 1-214-550-00 | 510Ω | 1/8W | metal oxide (1%) |
| R3 | 1-214-545-00 | 330Ω | 1/8W | metal oxide (1%) |
| R4 | 1-214-548-00 | 430Ω | 1/8W | metal oxide (1%) |
| R5 | 1-214-550-00 | 510Ω | 1/8W | metal oxide (1%) |
| R6 | 1-214-553-00 | 680Ω | 1/8W | metal oxide (1%) |
| R7 | 1-246-795-00 | 10kΩ | 1/8W | carbon |
| R8 | 1-246-803-00 | 47kΩ | 1/8W | carbon |
| R9 | 1-246-786-00 | 1.8kΩ | 1/8W | carbon |
| R10 | 1-246-790-00 | 3.9kΩ | 1/8W | carbon |
| R11 | 1-246-779-00 | 470Ω | 1/8W | carbon |
| R12, 13 | 1-246-795-00 | 10kΩ | 1/8W | carbon |
| R14 | 1-246-783-00 | 1kΩ | 1/8W | carbon |
| R14 | 1-246-786-00 | 1.8kΩ | 1/8W | carbon |
| | | **MISCELLANEOUS** | | |
| MIC | 8-814-189-00 | Microphone, C-1007A | | |
| S1 | 1-553-197-00 | Switch, slide; SAFETY | | |
| S2–7 | 1-553-235-00 | Switch, keyboard; STOP, FF, REW, PAUSE, RECORD, FORWARD | | |
| | 1-555-538-11 | Cord, w/plug | | |
| | ♦ 1-603-657-00 | Printed Circuit Board | | |

**ACCESSORIES & PACKING MATERIALS**

| Part No. | Description |
|---|---|
| 3-701-615-00 | Bag, plastic |
| 3-783-365-11 | Manual, instruction |

- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

9-954-949-01

Sony Corporation

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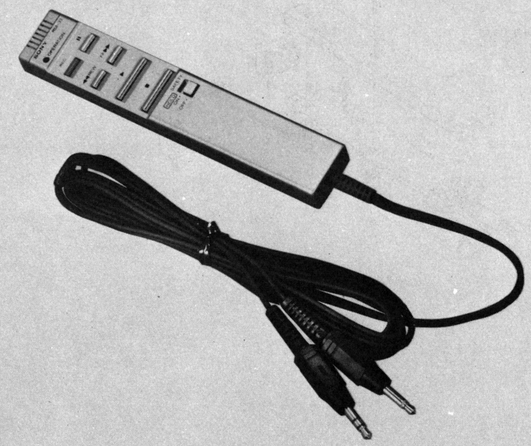
80G02171-1
Printed in Japan

# RM-33

*US Model*
*Canadian Model*
*AEP Model*
*E Model*
*UK Model*



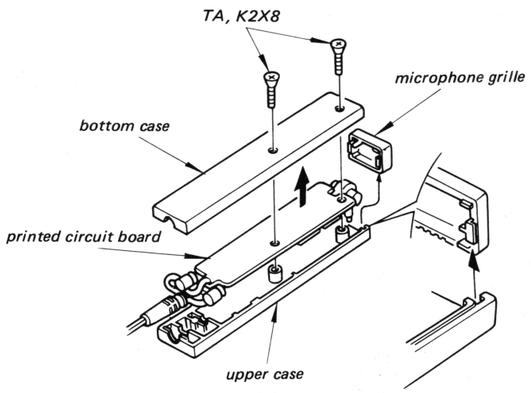
## REMOTE CONTROL UNIT

### SPECIFICATIONS

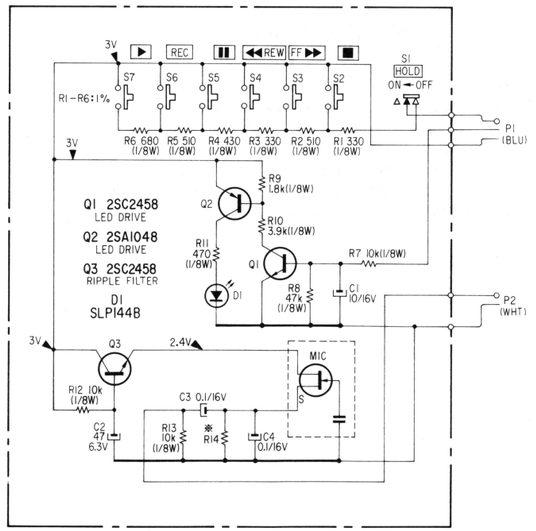
**Microphone:** Back-electret condenser microphone
**Dimensions:** Approx. 24 x 13 x 133 mm (w/h/d) (1 x 5/8 x 5¼ inches)
**Weight:** Approx. 90 g (2.8 oz)
**Plugs:** Microphone output plug (miniplug)
Remote Control output plug (miniplug)
**Cord length:** Approx. 1.8 m

SONY®
SERVICE MANUAL

## 1. DISASSEMBLY




## 2. SCHEMATIC DIAGRAM



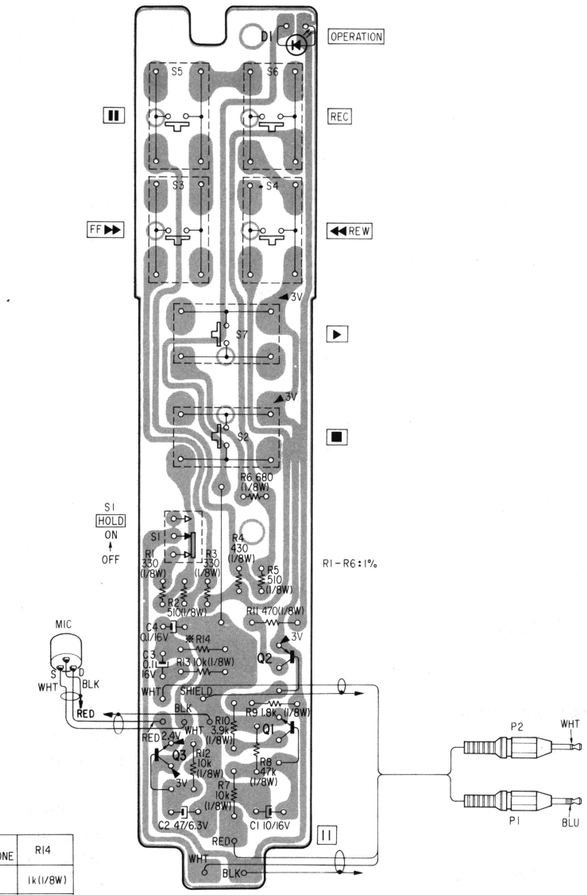

※R14

| MARK OF MICROPHONE | R14 |
|---|---|
| RED | 1k (1/8W) |
| BLK | 1.8k(1/8W) |

● ▭ : panel designation.



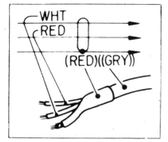
## 3. MOUNTING DIAGRAM



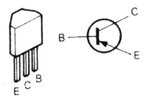

※R14

| MARK OF MICROPHONE | R14 |
|---|---|
| RED | 1k(1/8W) |
| BLK | 1.8k(1/8W) |

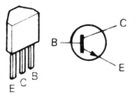
- Color code of sleeving over the end of the jacket.

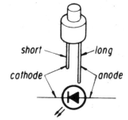



**2SA1048**




**2SC2458**

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